Memorandum

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To: **EDWARD DOLAN**
DISTRICT 12
ENVIRONMENTAL ANALYSIS

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From: **HECTOR SALAS**
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NPDES/STORM WATER UNIT

Subject: **Water Quality Technical Memorandum (WQ Tech Memo) to Widen and Extend a Second Travel Lane at the SR 133/ El Toro Road Intersection in the City of Laguna Beach**

Approach to the Water Quality Technical Memorandum

The purpose of the Water Quality Technical Memorandum (WQ Tech Memo) is to fulfill the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and to provide information, to the extent possible, for National Pollution Discharge Elimination System (NPDES) permitting. The WQ Tech Memo includes a discussion of the proposed project, the physical setting of the project area, and the regulatory framework with respect to water quality; it also provides data on surface water resources within the project area and the water quality of these waters, describes water quality impairments and beneficial uses, and identifies potential water quality impacts/benefits associated with the proposed project, and recommends avoidance and/or minimization measures for potential impacts.

Project Description

This project proposes to extend the second travel on the SR 133 lane by 600 feet in the NB direction and by 900 feet in the SB direction. Reassign the exclusive right-turn lane to an optional right/left turn lane on westbound El Toro Road. These improvements will provide smooth transition in the proximity of Rte-133/El Toro Road intersection. Details of the proposed project include:

- Construct additional pavement along NB roadbed to provide 8-foot shoulder and two12-foot travel lanes from station in the NB direction.
- Extend the 5X3 Reinforced Concrete Box by 4-5 feet
- Remove and Restripe all lane lines on NB Rte-133 to provide a standard left turn lane/4-foot soft median, travel lanes and shoulders
- Re-construct curb ramp on the SB at Rte133/El Toro Road intersection.
- Construct curb and gutter (Type A2-6) along NB direction
- Remove/Replace all detector loops at Rte133/El Toro Road intersection.
  Construct additional pavement and a retaining wall with architectural treatment as needed along with the SB roadbed to provide two 12-foot travel lanes and a 10-foot shoulder

- Construct a storm drain system along with the retaining wall, a culvert, and an articulated concrete block lined channel as needed.

Surface Water Features

The project is located in the Laguna Canyon Channel Watershed area within the San Juan Hydrologic Unit (HU) (901.12) of the San Diego Regional Water Quality Control Board located in Orange County. The receiving water body at the project location is Laguna Canyon Channel located approximately 7 miles upstream from the Pacific Ocean.

Based on the Final *2012 Integrated Report (CWA Section 303(d) List /305(b) Report)* approved by the SWRCB and the US EPA, Laguna Canyon Channel is on the 2012 Clean Water Act 303(d) list of Water Quality Limited Segments Requiring TMDLs for Sediment Toxicity and Toxicity from unknown sources.

The San Diego RWQCB has designated the following surface water beneficial uses for Laguna Canyon Channel at the project location:

- **Water Contact Recreation (REC-1)**: waters are used for recreation activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs.

- **Non-Contact Water Recreation (REC-2)**: water are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities

- **Agriculture Supply (AGR)** waters are used for farming, horticulture or ranching. These uses may include, but are not limited to irrigation, stock watering, and support of vegetation for range grazing.

- **Wildlife Habitat (WILD):** water support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

- **Warm Freshwater Habitat (WARM):** waters support warm water ecosystems that may include but are not limited to preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

Groundwater Features

The San Diego RWQCB Basin Plan has designated beneficial uses for ground waters of the Lower San Juan Hydrologic Unit (1.00). The existing beneficial uses for ground water in Laguna Hydrologic Area (1.11) are:

- **Municipal and Domestic Supply (MUN):** waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to drinking water supply.

- **Agriculture Supply (AGR):** waters are used for farming, horticulture or ranching. These uses include but are not limited to irrigation, stock watering, and support of vegetation for range grazing.

Regulatory Settings

This project must conform to all applicable water quality regulations and/or permit requirements of the State Water Resources Control Board (SWRCB) and any applicable local Regional Water Quality Control Board(s) (RWQCB) requirements including, but not limited to, the *Caltrans Statewide NPDES Permit* (Order No. 2012-0011-DWQ, NPDES No. CAS000003), the *Statewide NPDES General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities* (Order No. 2009-0009-DWQ, NPDES No. CAS000002), and the Caltrans Storm Water Management Plan (SWMP), and any subsequent revisions and/or additional requirements at the time of construction.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with State water quality standards. The most common federal permit triggering 401 Certification is a CWA Section 404 permit, issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Environmental Evaluation

Short Term Impacts During Construction

Under build alternative, the project proposes to extend the second travel lane on SR 133, construct additional pavement to provided shoulders and travel lanes in the northbound direction. The project will also include a culvert extension (5x3 ft Reinforced Concrete Box), reconstruct the curb ramp, construction of a retaining wall, and a storm drain system culvert with an articulated concrete block lined channel. The proposed project is anticipated to have a Disturbed Soil Area (DSA) greater than 1.0 acre.

Potential temporary impacts to water quality that can be anticipated during construction for the Build Alternative include sediments caused by the temporary access of construction equipment, excavation and grading for the widening of the roadway, concrete waste from the construction of new retaining wall, trash from workers and construction waste, petroleum products from construction equipment and/or vehicles, sanitary wastes from portable toilets and any other chemicals used for construction such as coolants used for equipment and/or concrete curing compounds. Culvert extensions of the 5x3 RCB and the storm drain system culvert with an articulated concrete block lined channel may require temporary stream diversions and possibly temporary construction site dewatering.

If the project causes a DSA greater than 1.0 acres, the project will comply with the Construction General Permit (CGP). The Build Alternative will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) and determine a Risk Level based on potential erosion and transport to receiving waters. The SWPPP will identify temporary Best Management Practices (BMPs) to address the potential temporary impacts to water quality. The BMPs identified in the project SWPPP will include measures such as temporary soil stabilization measures, linear sediment barriers (i.e. silt fence, gravel bag berms, fiber rolls), and construction site waste management (i.e. concrete washout, construction materials storage, litter/ waste management and construction site dewatering.

Long Term Impacts During Operation

Under build alternative the proposed project involves the extension of a travel lane on SR 133 with 12-foot wide lane and 8 ft shoulders, construct retaining walls, extend culverts and construct a articulated concrete block lined channel. The proposed project will increase the impervious surface by 0.63 acres and with the addition of the lane extension, there will be an increase in the typical pollutants generated during the operation of a transportation facility (sediment/ turbidity, nutrients, trash and debris, bacteria and viruses, oxygen demanding substances, organic compounds, oil and grease, pesticides and metals).

The project will implement post construction source control BMPs (Design Pollution Prevention BMPs) to address project related water quality impacts such as permanent soil stabilization to protect with vegetation the disturbed soil areas created by the construction of the project. In addition, the project will implement concentrated flow conveyance systems such as ditches, berms,

dikes and swales, overside drains, flared end sections, and outlet protection/ velocity dissipation devices to eliminate any permanent erosion and sedimentation caused by concentrated flows of runoff.

The addition of the lane extension and the increase in impervious surface by 0.63 acres has the potential to generate additional pollutants typically generated by highway facilities. Caltrans will evaluate the project to determine if the project meets the requirements for post construction storm water treatment controls under the Caltrans NPDES Storm Water Permit (Order No. 2012-0011-DWQ). Projects subject to post-construction treatment requirements include highway facility projects that create 1.0 acre or more of new impervious surface[1]. Since this project creates less than 1.0 acres of new impervious surface, the project is not subject to post construction treatment requirement under the NPDES permit. The new impervious surface for the proposed project will be evaluated during the design phase and if the increase impervious surface area calculated is over 1.0 acres, the project will be subject to the Caltrans NPDES permit requirements for post construction treatment controls.

The proposed project will be require a 401 Water Quality Certification from the San Diego RWQCB for work to extended the existing culvert and construct a new channel. Although under the Caltrans NPDES permit the project is not subject to post construction treatment requirements, the RWQCB under the 401 Certification process may have specific concerns associated with the project and may issue special conditions. The RWQCB will review the 401 Certification application to determine that the project does not alter the beneficial uses of the receiving waters at the project location. If the RWQCB determines that there are impacts to the beneficial uses of the receiving waters based on the proposed project, special conditions such as effluent limitations, monitoring or post construction treatment BMP requirements may be issued. Although it was determined under the Caltrans NPDES permit that post construction treatment requirements are not required, the RWQCB can require treatment under special conditions for the 401 Certification.

Avoidance and Minimization Measures

The Caltrans Storm Water Management Plan (SWMP) describes BMPs and practices to reduce the discharge of pollutants associated with the storm water drainage systems of State highways, facilities, and activities. The following measures have been identified to minimize impacts to water resources and water quality:

WQ-1
The project will comply with the provisions of the *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements for the State of California, Department of Transportation (CALTRANS) Order No. 2012-0011-DWQ, NPDES No. CAS00003* and the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (*Construction General Permit*)* Order No. 2009-

[1] Caltrans Statewide NPDES Storm Water Permit (Order No. 2012-0011-DWQ) Post Construction Storm Water Treatment Controls, *Section E.2.d.2).a).i).(1)*

0009-DWQ, NPDES No. CAS000002 and any subsequent permits in effect at the time of construction.

WQ-2
The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-storm water BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the *Storm Water Quality Handbooks: Construction Site Best Management Practices Manual* to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-storm water BMPs.

WQ-3
Design Pollution Prevention Best Management Practices (BMPs) shall be implemented such as preservation of existing vegetation, slope/ surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/ velocity dissipation devices.

WQ-4
Department approved treatment Best Management Practices (BMPs) will be implemented consistent with the requirements of the *National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements for the State of California, Department of Transportation (CALTRANS) Order No. 2012-0011-DWQ, NPDES No. CAS00003* and any subsequent permits in effect at the time of construction. Treatment BMPs may include biofiltration strips, biofiltration swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters and wet basins.

WQ-5
If dewatering is required, Construction site dewatering must comply with the *General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region (Order No. R9-2015-0013, NPDES No. CAG919003)* and any subsequent updates to the permit at the time of construction. This Permit addresses temporary dewatering operations during construction. Dewatering BMPs must be used to control sediment and pollutants, and the discharges must comply with the WDRs issued by the San Diego RWQCB

You can contact me at (657) 328-6163 with any questions you may have regarding Water Quality Technical Memorandum.